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(71) Applicant (for all designated States except US): BASELL POLIOLEFINE ITALIA S.p.A. [IT/IT]; Via Pergolesi

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): PERDOMI, Gianni [IT/IT]; Via Giovanni Falcone 2, I-44100 Ferrara (IT).
- (74) Agent: FISAULI, Beatrice; Basell Poliolefine Italia S.p.A, Intellectual Property, Via Pergolesi 25, I-20124 Milano (IT).
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(54) Title: POLYETHYLENE FILMS FOR PACKAGING

(57) Abstract: An elastic film comprising a polymer blend comprising (percent by weight): 1) 50 to 80% of an ethylene polymer composition comprising a recurring unit derived from an ester selected from (1) ethylenically unsaturated organic monomer of esters of unsaturated C₃-C₂₀ monocarboxylic acids and C₁, to C₂₄ monovalent aliphatic or alicyclic alcohols, and (2) vinyl esters of saturated C₂-C₁₈ carboxylic acids, wherein the ester content ranging from 2.5 to 8 wt% based on the total weight of the final ethylene polymer composition; the ethylene polymer composition having a density ranging from 0.920 to 0.935 g/mL; and 2) 20 to 50% of an ethylene-based polymer component having a density ranging from 0.9 to 0.930 g/mL and a melt flow rate up to 4 g/10 min. The film that has a ratio between the MD Elmendorf tear resistance and TD Elmendorf tear resistance of 0.3 or less is suitable for pallet application as banding tape.







In Itional Application No PCT/EP2004/005353

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 CO8L23/08 CO8J5/18 //(C08L23/08,C08L23:04) According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C08L C08J IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category ° Relevant to daim No. EP 0 065 359 A (UNION CARBIDE CORP) X 1-3,624 November 1982 (1982-11-24) page 1, line 9 - line 11 page 5, line 14 - page 6, line 1; claims; examples 3,13,14 X US 4 504 434 A (COOPER BARRY A) 1-3,612 March 1985 (1985-03-12) column 3, line 59 - column 5, line 68; claims; example 12 Α US 5 344 884 A (MCDANIEL MAX P ET AL) 1-3,66 September 1994 (1994-09-06) claims; example II Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: *T* tater document published after the international filing date "A" document defining the general state of the art which is not or priority date and not in conflict with the application but considered to be of particular relevance cited to understand the principle or theory underlying the *E* earlier document but published on or after the international invention filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to "L" document which may throw doubts on priority claim(s) or involve an inventive step when the document is taken alone which is cited to establish the publication date of another citation or other special reason (as specified) document of particular relevance; the claimed invention document referring to an oral disclosure, use, exhibition or cannot be considered to involve an Inventive step when the document is combined with one or more other such docuother means ments, such combination being obvious to a person skilled *P* document published prior to the international filing date but in the art. later than the priority date claimed *&* document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 3 January 2005 10 FEB 2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016 Clemente Garcia, R

INTERNATIONAL SEARCH REPORT

Intertional Application No PCT/EP2004/005353

C (Continue	tion) DOCIMENTS CONCIDENTS TO DE CONTINUE	PC1/EP2004/005353
	tion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/60909 A (NEGRI LUIGI; MOPLEFAN SPA (IT); PERRONE CORRADO (IT)) 23 August 2001 (2001-08-23) claims; table 1	1-6
	(11); PERRONE CORRADO (IT)) 23 August 2001 (2001-08-23)	1-6

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

emational application No. PCT/EP2004/005353

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)									
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:									
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:									
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:									
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).									
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)									
This International Searching Authority found multiple inventions in this international application, as follows:									
ann additional about									
see additional sheet									
As a result of the prior review under R. 40.2(e) PCT, no additional fees are to be refunded.									
1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.									
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.									
As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:									
4. No required additional search fees were timely paid by the applicant. Consequently, this international Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:									
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.									

FURTHER INFORMATION CONTINUED FROM PCT/ISAV 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1 (first part), 2, 3, 6 (as referred to claim 1, 1st part)

Elastic film comprising: (I) ethylene polymer composition and (II)(i) a linear polyethylene. Banding tape thereof.

2. claims: 1 (second part), 4, 5, 6 (as referred to claim 1, 2nd. part)

Elastic film comprising (I) ethylene polymer composition and (II)(ii) a blend of polyethylene and (ii) an interpolymer of propylene/alpha-olefin/ethylene having a xylene insoluble fraction greater than 70%. Banding tape thereof.

INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/EP2004/005353

				1017 27 200 17 003333		
Patent document cited in search report		Publication date	Patent family member(s)			Publication date
EP 0065359	Α	24-11-1982	AU EP GR JP ZA	8294182 0065359 75465 57182341 8202553	A1 A1 A	04-11-1982 24-11-1982 20-07-1984 10-11-1982 30-03-1983
US 4504434	Α	12-03-1985	US US	4425268 4436788		10-01-1984 13-03-1984
US 5344884	A	06-09-1994	NONE	و سے جی شاہ خے بہت ہے ہیں سازھان کے ک		
WO 0160909	A	23-08-2001	IT WO	FE20000002 0160909		16-08-2001 23-08-2001
US 2002032258	A1	14-03-2002	JP	2001014945	Α	19-01-2001